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1/1 - (C) WPI / DERWENT

- AN - 2001-019312 [03]
 AP - JP19990082660 19990326
 CPY - TAIC
 DC - B04 D13 D16 D21
 FS - CFI
 IC - A23K1/165 ; A23L1/30 ; A61K7/00 ; A61K38/46 ; A61P31/04 ; C12N9/36
 MC - B04-B04M B04-D01 B04-L01 B14-A01 D03-H02 D03-M D05-A02 D08-A05 D08-B
 M1 - [01] M423 M431 M710 M782 M905 P220 P912 Q233 Q254; RA00GC-T RA00GC-M
 RA00GC-N
 - [02] M423 M431 M710 M782 M905 P220 P912 Q233 Q254; RA0120-T RA0120-M
 RA0120-N
 PA - (TAIC) TAIYO KAGAKU KK
 PN - JP2000270858 A 20001003 DW200103 C12N9/36 006pp
 PR - JP19990082660 19990326
 XA - C2001-005830
 XIC - A23K-001/165 ; A23L-001/30 ; A61K-007/00 ; A61K-038/46 ; A61P-031/04 ;
 C12N-009/36
 AB - JP2000270858 NOVELTY - A lysozyme sugar composite (LSC) is isolated
 and purified from an egg white liquid containing at least one
 saccharide.
 - ACTIVITY - Antimicrobial.
 - Egg white liquid (EWL) (1 l) was homogenized, and EWL with protein
 content was isolated, to which trehalose (0.1 kg) was added and
 stirred for 1 hour at 5 deg. C to prepare the lysozyme sugar composite
 (LSC). EWL was treated with an alkali and then with a cation exchange
 resin like Amberlite IRC-50 (200 ml) to adsorb LSC. The resin settled
 separating a supernatant EWL was washed in water and 3% of salt
 solution (1000 ml) was added. 1N sodium hydroxide was added to elute
 LSC. The resin containing solution was filtered, and the obtained
 filtrate was set to pH 9.5. The salting method with 5% salt
 concentrations collected LSC (9.5 g) in a cake form was dried to
 obtain LSC crystals (3.1 g). Antimicrobial activity of LSC crystal
 opposing to gram negative microbe like Escherichia coli was determined
 by evaluating the number of living microbes for 24 hours at 35 deg. C.
 The result obtained showed that LSC crystal had 25% of the number of
 living microbes. Thus showing that LSC crystal had high antimicrobial
 activity opposing to E. coli.
 - MECHANISM OF ACTION - None given.
 - USE - As antimicrobial agent in gram positive and negative microbes,
 pharmaceutical, cosmetics, foodstuff and feed field, and as storage
 life improvement agent of foodstuffs such as boiled fish paste,
 custard cream, pickles, sausage, ham, cooked rice and egg processed
 goods. As quasi-drugs like mouth washing liquids and cosmetics like
 shampoo. Useful in livestock, preventing illness of aquatic animal
 feed additive, and animal drug. For inhibiting pathogenic microbe of
 dandruff and dental carries, and as rinse and dentifrice agent.
 - ADVANTAGE - LSC effectively reinforce the antimicrobial activity
 opposing to the gram positive and negative microbes. The antimicrobial
 spectrum is effectively enlarged by LSC. LSC effectively reduces the
 density of the conventional anti-microbial compound. LSC as storage
 life improvement agent prevents decomposition and disinfection of

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foodstuffs. LSC as livestock prevents the illness caused by aquatic animal feed additive or animal drug.

- (Dwg. 0/0)

CN - RA00GC-T RA00GC-M RA00GC-N RA0120-T RA0120-M RA0120-N

IW - LYSOZYME SUGAR COMPOSITE ANTIMICROBIAL AGENT GRAM NEGATIVE MICROBE ISOLATE PURIFICATION EGG WHITE LIQUID CONTAIN

IKW - LYSOZYME SUGAR COMPOSITE ANTIMICROBIAL AGENT GRAM NEGATIVE MICROBE ISOLATE PURIFICATION EGG WHITE LIQUID CONTAIN

NC - 001

OPD - 1999-03-26

ORD - 2000-10-03

PAW - (TAIC) TAIYO KAGAKU KK

TI - Lysozyme sugar composite as antimicrobial agent for gram negative microbe, is isolated and purified from egg white liquid containing saccharides

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- TI** - Lysozyme sugar composite as antimicrobial agent for gram negative microbe, is isolated and purified from egg white liquid containing saccharides
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- Egg white liquid (EWL) (1 l) was homogenized, and EWL with protein content was isolated, to which trehalose (0.1 kg) was added and stirred for 1 hour at 5 deg. C to prepare the lysozyme sugar composite (LSC). EWL was treated with an alkali and then with a cation exchange resin like Amberlite IRC-50 (200 ml) to adsorb LSC. The resin settled separating a supernatant EWL was washed in water and 3% of salt solution (1000 ml) was added. 1N sodium hydroxide was added to elute LSC. The resin containing solution was filtered, and the obtained filtrate was set to pH 9.5. The salting method with 5% salt concentrations collected LSC (9.5 g) in a cake form was dried to obtain LSC crystals (3.1 g). Antimicrobial activity of LSC crystal opposing to gram negative microbe like Escherichia coli was determined by evaluating the number of living microbes for 24 hours at 35 deg. C. The result obtained showed that LSC crystal had 25% of the number of living microbes. Thus showing that LSC crystal had high antimicrobial activity opposing to E. coli.
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- PD** - 1999-03-26
- ORD** - 2000-10-03

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